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SUGHRUE MION, PLLC				
2100 PENNSYLVANIA AVENUE, N.W.				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

sughrue@sughrue.com
PPROCESSING@SUGHRUE.COM
USPTO@SUGHRUE.COM

Office Action Summary

Application No.

10/585,428

Applicant(s)

LUCIDARME, THIERRY

Examiner

QUN SHEN

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 5-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 02 September 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This communication is a Second Action Final on the merits. Claims 1, 3-15 are amended, claim 2 is canceled. Claims 1, 3-15, after amendment, are currently pending and have been considered below.

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. FR 04/00134, filed on January 08, 2004.

Specification

1. The disclosure is objected to because of the following informalities: the sub-titles in the specification are missing.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.

- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Appropriate correction is required.

Claim Objection

2. Claims 1-15 are objected to because of the following informalities:

Claim 1 recites "said first and/or second subsystem" 2nd paragraph of claim 1, page 2.

"and/or" renders indefinite. For examination purpose, "and/or" is interpreted as "or".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: (See MPEP Ch. 2141)

Determining the scope and contents of the prior art;
Ascertaining the differences between the prior art and the claims in issue;
Resolving the level of ordinary skill in the pertinent art; and
Evaluating evidence of secondary considerations for indicating obviousness or nonobviousness.

3. Claims 1, 3-4, 6-7, 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 7,197,318 B2, Schwarz et al. (hereinafter Schwarz) in view of US 2005/0090257 A1, Kroner et al. (hereinafter Kroner).

As to claim 1, Schwarz discloses a method of allocating communications resources in a radio communications system comprising a first subsystem and a second subsystem using different radio access techniques and adapted to communicate with radio terminals (Figs 2, col 1, lines 6-13), the method comprising the following steps: determining an indication about the occupancy of the communications resources of said first and/or said second subsystem (Figs 2-3, load determination, col 2, lines 49 – 60, col 3, lines 3-15, the indication based on the a service priority and load). Although Schwarz does not expressly disclose indicator, consider Schwarz's teachings on determination of service based or load based handover with a predetermined threshold (col 3, line 65 – col 4, line 10), it would have been obvious an indicator is implied if not inherent in Schwarz's teaching.

Schwarz further discloses that when a call is to be set up for a radio terminal, allocating a communications resource of the first or second subsystem to the call taking into

account the indication so determined (col 2, line 49 – col 3, line 15, col 4, lines 11 – lines 33, allocating a communications resource of the first or second network to the call based on either service based or load based priority (indication), in connecting the call).

Schwarz does not elaborate "wherein, if the radio terminal for which a call is to be set up is attached to the first subsystem and if taking account of the indication that has been determined denotes allocating at least a communications resource of the second subsystem to support the call, an indication is sent to the radio terminal so that it attaches itself to the second subsystem before allocation of the communications resource to the second subsystem." However, the handover process of the radio terminal from the first subsystem to the second subsystem, upon receiving an indication that communication resource of the second subsystem is being allocated for the handover as described above is implied in Schwarz's method (col 4. Lines 36-41, receive incoming handover message from a target cell; col 5, lines 36-56; col 6, lines 35-46), as Schwarz uses a threshold (indication) to determine the loading of the target cell (second subsystem). During a handover process, a mobile terminal would have to be informed prior being handover to a target system. In an inter-system handover, the resource of target system would typically be assigned and occupied after the handover process has been initiated (typically after mobile breaking communication with the serving system).

Nevertheless, Kroner, in the same or similar field of endeavor, teaches that, in a inter-system handover situation (pars 0003-0004, 0007), radio resource of User equipment (UE) with the network can be managed by a central radio resource management unit, which evaluates the load of the target cell (network) based on measurement (pars 0013-0014, 0022) ... and the user equipment (i.e. radio terminal) can be informed the handover decision (intersystem cell reselection) and target cell load (i.e. indication of communications resources of the second subsystem) through broadcast message (pars 0017, 0019-0020, 0023-0024). Note that inter-system handover is a hard-handover (i.e. break before make). The resource of second subsystem (target wireless system) would therefore only be allocated and utilized after the handover decision has been made and handover process has been executed.

Therefore, consider both Schwarz and Kroner's teachings as a whole, it would have been obvious to one of skill in the art at the time of invention to incorporate Kroner's explicit teachings on the resource of second subsystem would be allocated and utilized after the handover is being setup.

As to claim 3, Schwarz as modified discloses the method according to claim 1, wherein said indication sent to the radio terminal is a message commanding it to attach itself to the second subsystem (Schwarz: col 4, lines 33-41, a handover message).

As to claim 4, Schwarz as modified discloses the method according to claim 1 but does not expressly disclose wherein the radio terminal is adapted to select a base station of

the radio communications system based on selection parameters and measurements effected on radio signals received from a plurality of base stations of the radio communications system and said indication sent to the radio terminal is a broadcast update of at least some of the selection parameters. Such base station selection and parameter update over broadcast is implied if not inherent in a handover process (Schwarz: col 2, line 49 – col 3 line 15, such selection is implied in handover operation, typically specified in the over the air standards), and therefore can be modified to favor the selection of a base station of the second subsystem (Schwarz: col 2, lines 28-41, at least for providing the service which is only available in WCDMA system).

As to claim 6, Schwarz as modified discloses the method according to claim 1, wherein a communications resource of the first subsystem is allocated to the call if the indication relating to the occupancy of the communications resources of the first subsystem reveals an occupancy below a threshold value (Lt) and a resource of the second subsystem is allocated to the call if said indication reveals an occupancy above said threshold value (Schwarz: col 3, lines 3-15, handover based on the load (indicator) with respect to the predetermined load threshold, may apply to first to second subsystem or vice versa, also see col 3, lines 59-64).

As to claim 7, Schwarz as modified discloses the method according to claim 6, wherein the threshold value (Lt) is set so that the first subsystem offers better communication quality than the second subsystem if its communications resources are occupied to a

level less than said threshold value and worse communication quality than the second subsystem if its communications resources are occupied to a level above said threshold value (Schwarz: col 3, line 65 – col 4, line 7, example of threshold setting was provided. Note that the quality of communication service is inversely proportional to the load (traffic congestion, interference, etc.). Therefore, it is implied if not inherent that communication performance becomes increasingly better or worse when the traffic load is less or above the load threshold.)

As to claim 9, Schwarz as modified discloses the method according to claim 1, wherein the radio access technique for said first subsystem or said second subsystem is a code division multiple access (CDMA) technique (Schwarz: Abstract, WCDMA system uses CDMA technique).

As to claim 10, Schwarz as modified discloses the method according to claim 1, wherein the radio access technique for said first subsystem or said second subsystem is a time division multiple access (TDMA) technique (Schwarz: Abstract, GSM is a TDMA technique).

As to claim 11, Schwarz as modified discloses the method according to claim 1 but does not expressly disclose wherein the second subsystem has a substantially narrower frequency spectrum than the first subsystem. However, it is well known fact that in certain countries, the authority may allocate more spectrum to one system versus

another (for example, more spectrum to GSM than WCDMA). In some other countries, the spectrum allocation may be the opposite.

As to claim 12, Schwarz as modified discloses the method according to claim 1, wherein the indication relating to the occupancy of resources takes into account a quality of service associated with calls for which resources have been allocated (Schwarz: col 3, lines 3-39, also see claim 1).

As to claim 13, Schwarz as modified discloses the method according to claim 1, wherein the first subsystem and the second subsystem are each adapted to determine the indication relating to the occupancy of its own communications resources (Schwarz: Figs 2-3, also see analysis of claim 1) and the indication that has been determined relating to the occupancy of the communications resources of the other subsystem and whichever of said first and second subsystems to which the radio terminal is attached determines if the communications resource to be allocated to the call is a resource of the first subsystem or the second subsystem (Kroner: Fig 1, par 0013).

As to claim 14, Schwarz as modified discloses the method according to claim 1, wherein the first subsystem is adapted to communicate with radio terminals for a first set of services and the second subsystem is adapted to communicate with radio terminals for second set of services and allocating a communications resource of the first or second subsystem to the call further takes into account the service provided for said call

(Schwarz: col 2, lines 28-41, indicating while GSM and WCDMA may establish communication with the mobile on its own, for the service only available in WCDMA network, communication will direct to WCDMA network).

As to claim 15, Schwarz as modified discloses the radio communications system adapted to use the method according to any preceding claim and comprising a plurality of subsystems, at least some of which use different radio access techniques (Schwarz: Figs 4A-B, abstract, WCDMA and GSM belong to different radio access techniques).

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Schwarz in view of US 6,721,565 B1, Ejzak et al. (hereinafter Ejzak).

As to claim 5, Schwarz discloses a method of allocating communications resources in a radio communications system comprising a first subsystem and a second subsystem using different radio access techniques and adapted to communicate with radio terminals (Figs 2, col 1, lines 6-13, see discussion in claim 1), the method comprising the following steps:
determining an indication about the occupancy of the communications resources of said first and/or said second subsystem, and
when a call is to be set up for a radio terminal, allocating a communications resource of the first or second subsystem to the call taking into account the indication so determined (see discussion and rejection in claim 1)

Schwarz also suggests an inter system handover from a GSM to a WCDMA network if a

mobile terminal is using a service in the GSM system and wants to establish a service which only WCDMA can provide (col 2, lines 33-41). An ordinary skill in the art would understand that a GSM network is based on circuit switch technology. One of the services GSM network is not capable of but WCDMA can provide is a packet data call, as WCDMA network supports both circuit and packet switches. Therefore, a packet capable terminal may request a packet data service and Schwarz teaches to handover to a WCDMA network in such a situation. Such teachings, even though, not explicitly, but read on the following claimed limitation: wherein calls between the radio terminals and the first subsystem or the second subsystem are carried out in packet mode or in circuit mode and a communications resource of the first or second subsystem is allocated to the call taking account of the indication that has been determined only if said call is to be carried out in packet mode.

Nevertheless, Ejzak, in the same field of endeavor, indicates more explicitly about the handover situation between systems supporting circuit call and packet call (Ejzak: Figs 2-3, col 9, lines 53 – 55). Consider Schwarz and Ejzak's teachings as a whole, it would have been obvious to one of skill in the art at the time of invention to incorporate Schwarz's handover mechanism by considering the handover situation described by Ejzak and setup higher handover priority to packet mode of operation whenever available for load balance and network capacity optimization (more network capacity available for packet switch network).

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schwarz in view of US 2005/0277416 A1, Tolli et al. (hereinafter Tolli).

As to claim 8, Schwarz discloses a method of allocating communications resources in a radio communications system comprising a first subsystem and a second subsystem using different radio access techniques and adapted to communicate with radio terminals, (see discussion in claim 1) the method comprising the following steps: determining an indication about the occupancy of the communications resources of said first and/or said second subsystem (see discussion in claim 1), and when a call is to be set up for a radio terminal, allocating a communications resource of the first or second subsystem to the call taking into account the indication so determined (see discussion in claim 1).

Schwarz further discloses that if the radio terminal for which a call is to be set up is attached to the first subsystem, a communications resource of the second subsystem is also allocated to the call if the indication relating to the occupancy of the communications resources of the second subsystem reveals an occupancy below a second threshold value (Lc) (col 3, lines 3-39, determining means for determining the load of one of the at least two systems, used by the connection (i.e. determining the occupancy of the communications resources of at least one of the first and second subsystems), and resources sharing between GSM and WCDMA systems, also see analysis of claim 6 about the threshold setting, obviously, such threshold can be applied to either GSM, WCDMA, or both).

Schwarz teaches that threshold can be used for service based or load based handover (Fig 1, col 5, lines 26-34) but does not elaborate wherein a communications resource of the first subsystem is allocated to the call if the indication relating to the occupancy of the communications resources of the first subsystem reveals an occupancy below a threshold value (Lt) and a resource of the second subsystem is allocated to the call if said indication reveals an occupancy above said threshold value.

Tolli, in the same or similar field of endeavor, suggests a predetermined threshold to determine the handover, such that the load based handovers may be triggered when the threshold in the source cell (i.e. serving communication subsystem) is reached. The threshold should also be applied to target cells based on the load of target cells (Fig 11, pars 0025, 0037, 0091-0096).

Therefore, consider Schwarz and Tolli's teachings as a whole, it would have been obvious to one of skill in the art at the time of invention to incorporate Schwarz's handover mechanism by considering the handover thresholds regarding source and target cells loading situation suggested by Tolli to achieve load balance and network capacity optimization during inter-system handover operation.

Response to Argument

Applicant's arguments are considered and they are moot in view of new ground of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to QUN SHEN whose telephone number is (571)270-7927. The examiner can normally be reached on 9:30 am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jinsong Hu can be reached on 571-272-3965. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/QUN SHEN/
Examiner, Art Unit 2617

/Jinsong Hu/
Supervisory Patent Examiner, Art Unit 2617